

**SPARTAN CHEMICAL COMPANY, INC.
WHMIS MATERIAL SAFETY DATA SHEET**

SECTION I: PRODUCT INFORMATION

PRODUCT IDENTIFIER

JD-4 SEMI-SYNTHETIC METALWORKING FLUID CONCENTRATE

PRODUCT USE: Semi-synthetic machining fluid

MANUFACTURER'S NAME & ADDRESS

Spartan Chemical Company, Inc.
1110 Spartan Drive, Maumee, OH 43537 USA

MEDICAL EMERGENCY TELEPHONE

888/314-6171 (24 Hours)

PRODUCT INFORMATION

800/537-8990

SECTION II: HAZARDOUS INGREDIENTS

CAS REGISTRY NO.	% W	CHEMICAL NAME(S)	TLV			LD50	LC50
			TWA mg/m ³	STEL mg/m ³	Ceiling mg/m ³		
68608-26-4	10-15	Petroleum sulfonate	----	Not Established	----	Not available	Not available
64742-52-5	10-15	Hydrotreated naphthenic oil	5 (oil mist)	----	----	Not available	Not available
64742-53-6	5-10	Hydrotreated naphthenic oil	5 (oil mist)	----	----	Not available	Not available
102-71-6	5-10	Triethanolamine	5 (ACGIH)	----	----	Not available	Not available
Proprietary	1-5	Polyether phosphate	----	Not Established	----	Not available	Not available
8002-26-4	1-5	Tall oil fatty acids	5 (oil mist)	----	----	Not available	Not
available							
34398-01-1	1-5	Alcohol ethoxylate	----	Not Established	----	Not available	Not
available							
111-46-6	1-5	Diethylene glycol	----	Not Established	----	Not available	Not
available							
107-41-5	1-5	Hexylene glycol	----	----	121 (ACGIH)	Not available	Not available
4719-04-4	1-5	Hexahydro-1,3,5-tris	----	Not Established	----	Not available	Not
available							
		(2-hydroxyethyl)-s-triazine					

SECTION III: PHYSICAL DATA

BOILING POINT

> 100 °C (212 °F)

VAPOUR PRESSURE

Not established

VAPOUR DENSITY (AIR = 1)

Not established

pH

9.0-10.0

SPECIFIC GRAVITY (H₂O = 1)

1.01

EVAPORATION RATE (butyl acetate = 1)

< 1

SOLUBILITY IN WATER

Complete

APPEARANCE AND ODOUR

Brown liquid, mild amine odor

PERCENT SOLID BY WEIGHT

51-57%

FREEZING POINT

Not available

ODOUR THRESHOLD

Not available

COEFFICIENT OF WATER/OIL DISTRIBUTION

Not available

PHYSICAL STATE

GAS__ LIQUID X SOLID _____

SECTION IV: FIRE & EXPLOSION DATA

FLASH POINT

> 100 °C (212°F)

EXTINGUISHING MEDIA

Water spray, CO₂ or dry chemical

HAZARDOUS COMBUSTION PRODUCTS

Carbon monoxide, carbon dioxide, sulfur oxides

METHOD USED

ASTM - D56

CONDITIONS OF FLAMMABILITY

Not applicable

FLAMMABLE LIMITS

Not established

AUTO-IGNITION TEMPERATURE

Not applicable

EXPLOSION DATA

Not applicable

SPECIAL FIRE FIGHTING PROCEDURES

Use self-contained breathing apparatus for maximum respiratory protection. Water may be used to cool containers if not ruptured or leaking.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Do not mix or store with strong oxidants like liquid chlorine or concentrated oxygen.

SECTION V: REACTIVITY DATA

STABILITY: STABLE <u>X</u>	CONDITIONS OF INSTABILITY Not established	CONDITIONS OF REACTIVITY Not established
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INCOMPATIBILITY (MATERIALS TO AVOID) Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS Carbon dioxide, carbon monoxide, sulfur oxides

SECTION VI: TOXICOLOGICAL PROPERTIES

PRIMARY ROUTES OF ENTRY: Eye Contact, Skin Contact, Ingestion and Inhalation

EXPOSURE LIMIT

Not established for mixture.

EFFECTS OF ACUTE EXPOSURE:

EYE CONTACT: Causes eye irritation with symptoms such as pain, redness, swelling and possible tissue damage.

SKIN CONTACT: Causes skin irritation with symptoms such as pain, redness and swelling.

INGESTION: Harmful if swallowed. Symptoms may include nausea, vomiting, pain and diarrhea.

INHALATION: Breathing product mist may cause respiratory irritation with symptoms such as coughing and difficulty breathing.

EFFECTS OF CHRONIC EXPOSURE

Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe lung inflammation and other injury. Contains triethanolamine which may cause skin sensitization with repeated contact. Repeated exposure to alkanolamines may cause liver and kidney damage. No chronic health effects are expected from the intended use of this product.

IRRITANCY OF PRODUCT

Causes eye & skin irritation.

SENSITIZATION TO PRODUCT

Not available

CARCINOGENICITY

No

REPRODUCTIVE TOXICITY

Not available

TERATOGENICITY

Not available

MUTAGENICITY

Not available

SYNERGISTIC PRODUCTS

Not available

SECTION VII: PREVENTIVE MEASURE

PERSONAL PROTECTIVE EQUIPMENT / ENGINEERING CONTROLS:

Wear rubber or other impervious gloves and splash goggles when handling undiluted product. Gloves are also recommended when working with diluted product for individuals with sensitive skin. Provide good general ventilation. Local exhaust ventilation may be necessary for some operations. If respiratory irritation cannot be prevented by ventilation, use of a NIOSH approved respirator suitable for the conditions of use and chemicals in Section II should be considered.

LEAK AND SPILL PROCEDURE: Dike and contain spills with inert material (sand, earth, commercial absorbent, etc.) and transfer to containers for disposal. Rinse area with water and flush to sanitary sewer. Keep spill out of storm sewers and waterways.

WASTE DISPOSAL METHOD: Consult an expert on disposal of recovered material and ensure compliance with laws and regulations.

HANDLING PROCEDURES: Do not get in eyes, on skin or on clothing. Avoid breathing product mist. Do not swallow. Wash thoroughly after handling.

STORAGE REQUIREMENTS: Store in a cool dry place. Keep containers sealed and stored upright when not in use. Do not mix with other chemicals. Keep out of reach of children.

SPECIAL SHIPPING INFORMATION: Not regulated. Shipping Description: Compounds, metal cutting, liquids, n.o.s.

SECTION VIII: FIRST AID MEASURES

EYES: Immediately flush eyes with water for at least 15 minutes. Remove contact lenses. Get medical attention.

SKIN: Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists. Wash contaminated clothing before reuse.

INGESTION: Do not induce vomiting. Get medical attention immediately. Do not give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. Get medical attention if irritation persists.

SECTION IX: PREPARATION INFORMATION

JD-4 SEMI-SYNTHETIC METALWORKING FLUID CONCENTRATE

DATE OF PREPARATION: March 7, 2011

SUPERCEDES: March 7, 2008

PREPARED BY: Ronald T. Cook / Manager, Regulatory Affairs / Spartan Chemical Company, Inc.

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